

| Smart Skies            |       |                |  |
|------------------------|-------|----------------|--|
| 2002 Mathematics       |       |                |  |
| Content Standards      |       |                |  |
| New Mexico Mathematics |       |                |  |
| Grade 5                |       |                |  |
| Activity/Lesson        | State | Standards      |  |
| Fly by Math            | NM    | MA.5.5.M.2.1   | Solve measurement problems using appropriate tools involving length, perimeter, weight, capacity, time, and temperature.   |
| Fly by Math            | NM    | MA.5.5.M.2.2   | Select and use strategies to estimate measurements including length, distance, capacity, and time.   |
| Fly by Math            | NM    | MA.5.5.D.1.1   | Construct, read, analyze, and interpret tables, charts, graphs, and data plots.  |
| Fly by Math            | NM    | MA.5.5.D.1.3   | Display, analyze, compare, and interpret different data sets, including data sets of different sizes.  |
| Fly by Math            | NM    | MA.5.5.D.1.4   | Organize and display single-variable data in appropriate graphs and representations.   |
| Line Up with Math      | NM    | MA.5.5.M.2.1   | Solve measurement problems using appropriate tools involving length, perimeter, weight, capacity, time, and temperature.   |
| Line Up with Math      | NM    | MA.5.5.M.2.2   | Select and use strategies to estimate measurements including length, distance, capacity, and time.   |
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| Smart Skies            |       |                |  |
| 2002 Mathematics       |       |                |  |
| Content Standards      |       |                |  |
| New Mexico Mathematics |       |                |  |
| Grade 6                |       |                |  |
| Activity/Lesson        | State | Standards      |  |
| Fly by Math            | NM    | MA.6.6.A.3.2.d | Interpret graphs, tables, and charts to analyze data   |
| Fly by Math            | NM    | MA.6.6.M.2.1   | Apply various measurement techniques and tools, units of measure, and degrees of accuracy to find accurate rational number representations for length, liquid, weight, perimeter, temperature, and time. |
| Fly by Math            | NM    | MA.6.6.D.1.1   | Use statistical representations to analyze data.   |
| Fly by Math            | NM    | MA.6.6.D.1.5   | Solve problems by collecting, organizing, displaying and interpreting data.  |
| Fly by Math            | NM    | MA.6.6.D.1.11  | Formulate and solve problems by collecting, organizing, displaying, and interpreting data.   |
| Line Up with Math      | NM    | MA.6.6.G.1.1.a | Measure, identify, and draw angles, perpendicular and parallel lines, rectangles, and triangles by using appropriate tools (e.g., straightedge, ruler, compass, protractor, drawing software)            |

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| Line Up with Math             | NM           | MA.6.6.M.2.1     | Apply various measurement techniques and tools, units of measure, and degrees of accuracy to find accurate rational number representations for length, liquid, weight, perimeter, temperature, and time.                |
| <b>Smart Skies</b>            |              |                  |   |
| <b>2002 Mathematics</b>       |              |                  |   |
| <b>Content Standards</b>      |              |                  |   |
| <b>New Mexico Mathematics</b> |              |                  |   |
| <b>Grade 7</b>                |              |                  |   |
| <b>Activity/Lesson</b>        | <b>State</b> | <b>Standards</b> |   |
| Fly by Math                   | NM           | MA.7.7.A.1.6     | Solve problems involving rate, average speed, distance, and time.   |
| Fly by Math                   | NM           | MA.7.7.M.1.3     | Compare masses, weights, capacities, geometric measures, times, and temperatures within measurement systems.  |
| Fly by Math                   | NM           | MA.7.7.D.1.1     | Describe how data representations influences interpretation.  |
| Fly by Math                   | NM           | MA.7.7.D.1.2     | Select and use appropriate representation for presenting collected data and justify the selection.  |
| Fly by Math                   | NM           | MA.7.7.D.1.6     | Identify ordered pairs of data from a graph and interpret the data in terms of the situation depicted by the graph.   |
| Fly by Math                   | NM           | MA.7.7.D.1.7     | Use various scales and formats to display the same data set.  |
| Fly by Math                   | NM           | MA.7.7.D.1.9     | Collect, organize, and represent data sets that have one or more variables and identify relationships among variables within a data set.  |
| Fly by Math                   | NM           | MA.7.7.D.1.13    | Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, and selecting, collecting, and displaying appropriate data to address the problem. |
| Fly by Math                   | NM           | MA.7.7.D.2.2     | Know various ways to display data sets (e.g., stem and leaf plot, box and whisker plot, scatter plots) and use these forms to display a single set of data or to compare two sets of data.                              |
| Fly by Math                   | NM           | MA.7.7.D.2.4     | Use appropriate technology to gather and display data sets and identify the relationships that exist among variables within the data set.   |
| Line Up with Math             | NM           | MA.7.7.N.2.6.a   | Interpret the absolute value as the distance of the number from zero on a number line   |
| Line Up with Math             | NM           | MA.7.7.A.1.6     | Solve problems involving rate, average speed, distance, and time.   |
| Line Up with Math             | NM           | MA.7.7.A.4.1     | Use variables and appropriate operations to write an expression, an equation, and/or an inequality that represents a verbal description involving change.   |
| Line Up with Math             | NM           | MA.7.7.A.4.2     | Interpret and evaluate expressions involving integer powers and simple roots as they relate to change.  |

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| Line Up with Math             | NM           | MA.7.7.M.1.3     | Compare masses, weights, capacities, geometric measures, times, and temperatures within measurement systems.  |
| Line Up with Math             | NM           | MA.7.7.D.1.11    | Identify and explain the effects of scale and/or interval changes on graphs of whole number data sets.  |
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| <b>2002 Mathematics</b>       |              |                  |   |
| <b>Content Standards</b>      |              |                  |   |
| <b>New Mexico Mathematics</b> |              |                  |   |
| <b>Grade 8</b>                |              |                  |   |
| <b>Activity/Lesson</b>        | <b>State</b> | <b>Standards</b> |   |
| Fly by Math                   | NM           | MA.8.8.A.4.4     | Solve multi-step problems that involve changes in rate, average speed, distance, and time.  |
| Fly by Math                   | NM           | MA.8.8.G.1.1     | Recognize, classify, and discuss properties of all geometric figures including point, line, and plane.  |
| Fly by Math                   | NM           | MA.8.8.M.2.7     | Solve simple problems involving rates and derived measurements for such properties as velocity and density.   |
| Fly by Math                   | NM           | MA.8.8.D.1.2     | Generate, organize, and interpret real numbers in a variety of situations.  |
| Fly by Math                   | NM           | MA.8.8.D.1.3.f   | Organize, analyze, and display appropriate quantitative and qualitative data to address specific questions including:<br>charts and tables                    |
| Fly by Math                   | NM           | MA.8.8.D.2.1     | Use changes in scales, intervals, or categories to help support a particular interpretation of data.  |
| Fly by Math                   | NM           | MA.8.8.D.2.2     | Generate, organize, and interpret real number and other data in a variety of situations.  |
| Fly by Math                   | NM           | MA.8.8.D.2.4     | Interpret and analyze data from graphical representations and draw simple conclusions (e.g., line of best fit).   |
| Fly by Math                   | NM           | MA.8.8.D.2.7     | Identify simple graphic misrepresentations and distortions of sets of data (e.g., unequal interval sizes, omission of parts of axis range, scaling).          |
| Fly by Math                   | NM           | MA.8.8.D.2.8     | Use appropriate technology to display data as lists, tables, matrices, graphs, and plots and to analyze the relationships of variables in the data displayed. |
| Fly by Math                   | NM           | MA.8.8.D.3.1     | Describe how changes in scale, intervals, or categories influence arguments for a particular interpretation of the data.                                      |
| Fly by Math                   | NM           | MA.8.8.D.3.2     | Describe how reader bias, measurement errors, and display distortion can affect the interpretation of data, predictions, and inferences based on data.        |
| Line Up with Math             | NM           | MA.8.8.A.4.1     | Use graphs, tables, and algebraic representations to make predictions and solve problems that involve change.   |

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| Line Up with Math                 | NM           | MA.8.8.A.4.2        | Estimate, find, and justify solutions to problems that involve change using tables, graphs, and algebraic expressions.   |
| Line Up with Math                 | NM           | MA.8.8.A.4.4        | Solve multi-step problems that involve changes in rate, average speed, distance, and time.   |
| Line Up with Math                 | NM           | MA.8.8.A.4.5        | Analyze problems that involve change by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing, and observing patterns.   |
| Line Up with Math                 | NM           | MA.8.8.G.1.1        | Recognize, classify, and discuss properties of all geometric figures including point, line, and plane.   |
| Line Up with Math                 | NM           | MA.8.8.G.2.1        | Represent, formulate, and solve distance and geometry problems using the language and symbols of algebra and the coordinate plane and space (e.g., ordered triplets).  |
| Line Up with Math                 | NM           | MA.8.8.M.2.7        | Solve simple problems involving rates and derived measurements for such properties as velocity and density.  |
| <b>Smart Skies</b>                |              |                     |  |
| <b>2002 Mathematics</b>           |              |                     |  |
| <b>Content Standards</b>          |              |                     |  |
| <b>New Mexico Mathematics</b>     |              |                     |  |
| <b>Grades 9-12 (Grades: 9-12)</b> |              |                     |  |
| <b>Activity/Lesson</b>            | <b>State</b> | <b>Standards</b>    |  |
| Fly by Math                       | NM           | MA.9-12.9-12.A.2.13 | Read information and draw conclusions from graphs, and identify properties of a graph that provide useful information about the original problem.  |
| Fly by Math                       | NM           | MA.9-12.9-12.A.3.6  | Write an equation of the line that passes through two given points.  |
| Fly by Math                       | NM           | MA.9-12.9-12.A.3.7  | Verify that a point lies on a line, given an equation of the line, and be able to derive linear equations given a point and a slope.   |
| Fly by Math                       | NM           | MA.9-12.9-12.A.3.8  | Determine whether the graphs of two given linear equations are parallel, perpendicular, coincide or none of these.   |
| Fly by Math                       | NM           | MA.9-12.9-12.G.1.6  | Use counterexamples to show that an assertion is false and recognize that a single counterexample is sufficient to refute a universal statement.   |
| Fly by Math                       | NM           | MA.9-12.9-12.G.2.3  | Use basic geometric ideas (e.g., the Pythagorean theorem, area and perimeter) in the context of the Cartesian coordinate plane (e.g., calculate the perimeter of a rectangle with integer coordinates and with sides parallel to the coordinate axes, and of a rectangle with sides not parallel). |
| Fly by Math                       | NM           | MA.9-12.9-12.G.4.8  | Describe the intersections of a line and a plane, intersections of lines in the plane and in space, or of two planes in space.   |

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| Fly by Math       | NM | MA.9-12.9-12.D.1.1  | Explain the differences between various methods of data collection.   |
| Fly by Math       | NM | MA.9-12.9-12.D.2.2  | Explain the meaning of univariate and bivariate data.   |
| Fly by Math       | NM | MA.9-12.9-12.D.2.3  | Display the distribution of univariate data, describe its shape using appropriate summary statistics, and understand the distinction between a statistic and a parameter.   |
| Fly by Math       | NM | MA.9-12.9-12.D.2.7  | Compare and draw conclusions between two or more sets of univariate data using basic data analysis techniques and summary statistics.   |
| Fly by Math       | NM | MA.9-12.9-12.D.2.15 | Evaluate published reports that are based on data by examining the design of the study, the appropriateness of the data analysis, and the validity of conclusions.  |
| Line Up with Math | NM | MA.9-12.9-12.A.1.4  | Explain that the distance between two numbers on the number line is the absolute value of their difference.   |
| Line Up with Math | NM | MA.9-12.9-12.A.3.6  | Write an equation of the line that passes through two given points.   |
| Line Up with Math | NM | MA.9-12.9-12.A.3.7  | Verify that a point lies on a line, given an equation of the line, and be able to derive linear equations given a point and a slope.  |
| Line Up with Math | NM | MA.9-12.9-12.A.3.8  | Determine whether the graphs of two given linear equations are parallel, perpendicular, coincide or none of these.  |
| Line Up with Math | NM | MA.9-12.9-12.G.1.1  | Understand that numerical values associated with measurements of physical quantities must be assigned units of measurement or dimensions; apply such units correctly in expressions, equations and problem solutions that involve measurements; and convert a measurement using one unit of measurement to another unit of measurement. |
| Line Up with Math | NM | MA.9-12.9-12.G.1.6  | Use counterexamples to show that an assertion is false and recognize that a single counterexample is sufficient to refute a universal statement.  |
| Line Up with Math | NM | MA.9-12.9-12.G.2.2  | Determine the midpoint and distance between two points within a coordinate system and relate these ideas to geometric figures in the plane (e.g., find the center of a circle given the two points of a diameter of the circle).  |
| Line Up with Math | NM | MA.9-12.9-12.G.2.3  | Use basic geometric ideas (e.g., the Pythagorean theorem, area and perimeter) in the context of the Cartesian coordinate plane (e.g., calculate the perimeter of a rectangle with integer coordinates and with sides parallel to the coordinate axes, and of a rectangle with sides not parallel).                                      |
| Line Up with Math | NM | MA.9-12.9-12.G.4.8  | Describe the intersections of a line and a plane, intersections of lines in the plane and in space, or of two planes in space.  |